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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/558,432

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Seung-Myun Baek

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EXAMINER

WYLLIE, CHRISTOPHER T

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/558,432	Applicant(s) BAEK ET AL.	
	Examiner CHRISTOPHER T. WYLLIE	Art Unit 2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-8 and 10-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,6-8 and 10-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 November 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/21/2009; 06/10/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED OFFICE ACTION

1. This action is responsive to the communication received May 21st, 2009. Claims 1-2, 6, and 10 have been amended. Claims 5, 9, and 13-18 have been canceled. Claims 1-4, 6-8, and 10-12 have been entered and are presented for examination.
2. Application 10/558,432 is a 371 of PCT/KR04/01152 (05/14/2004) and claims priority to Foreign Applications 10-2004-0022208 (03/31/2004) and 10-2004-0034962 (05/30/2003) from the Republic of Korea.
3. Applicant's arguments, filed May 21st, 2009, have been fully considered, but deemed moot in view of the new grounds of rejection, which has been necessitated by the amendment.

Claim Objections

4. Claims 1, 6, and 10 are objected to because of the following informality:
Claims 1, 6, and 10 recite the term "the number of arguments", this must be changed to ---a number of arguments---. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 1-4, 6-8, 10-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "an argument field including the number of arguments according to a version of a protocol applied to one electric device for performing the command

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code, wherein the other electric device executes an operation by using the command code and as many arguments as necessary in the version of the protocol applied to the other electric device.” However, the examiner is unclear whether there are multiple “one electric devices” or if the one electric device is transmitting the message which includes the command code field and argument field to the “other electric device.” In order to expedite prosecution on the merits, the latter interpretation will be employed to examine claims 1-4. Claims 6 and 10 recite similar features and consequently have similar issues.

Claims 2-4, 7-8, and 11-12 are also rejected for the reasons stated above, since they ultimately depend on rejected claims 1, 6, and 10.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-2, 4, 6, 8, 10, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (A New Control Protocol for Home Appliances – LnCP - 2001) in view of Merrick et al. (US 7,028,312).

Regarding claim 1, Lee et al discloses at least two electric devices (**see p. 287, Figure 1 the Network Manager and the Refrigerator**) and a network based on a predetermined protocol for connecting the electric devices (**see Abstract, lines 1-9 [the protocol linking all the devices is LnCP and uses the power line as a network bus]**), wherein a message transmitted between one device and the other device comprises a command code field including a command code that is to be performed by the other device and an argument field including a number of arguments (**see p. 287 column 2, lines 29-35 and Figure 7a., Request message [the master device (the network manager) sends the slave (the refrigerator) a request message that includes a Command Code Field and an Argument Field that causes the device to perform an operation]**). Lee et al. is silent regarding the number of arguments

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according to a version of the protocol of the one electric device for performing the command code, wherein the other electric device executes an operation by using the command code and as many arguments as necessary in the version of the protocol applied to the other electric device. However, Merrick et al. disclose such features **(column 15, lines 9-31 and column 24, lines 30-48 [arguments are encoded into a message and sent to the server (device) to perform a function with the arguments and to send back the return arguments; the message sent may include more arguments (values) due to an updated version; however, the mechanism allows the service to continue to function with using only information that existed in the previous version])**.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Merrick et al. into the system of Lee et al. The method of Merrick et al. can be implemented by incorporating a mechanism in the other device (refrigerator) that allows for messages sent from the one device (network manager), which uses an updated version of a protocol with more input values to perform a command, to process messages using only the known values of the protocol to perform a command.

Regarding claim 2, Lee et al. further discloses that the other electric device receives the message and extracts the arguments from the argument field **(see p. 290, Section 6.1 and Figure 7a [the request message includes the command code and the arguments to execute the command code; it is inherent that the refrigerator or any other slave device with have to extract the information from both fields in**

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order to perform the requested function])). Lee et al. is silent regarding the number of arguments according to a version of the protocol of the electric device for performing the command code. However, Merrick et al. disclose such features (column 15, lines 9-31 and column 24, lines 30-48 [arguments are encoded into a message and sent to the server (device) to perform a function with the arguments and to send back the return arguments; the message sent may include more arguments (values) due to an updated version; however, the mechanism allows the service to continue to function with using only information that existed in the previous version])).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Merrick et al. into the system of Lee et al. The method of Merrick et al. can be implemented by incorporating a mechanism in the other device (refrigerator) that allows for messages sent from the one device (network manager), which uses an updated version of a protocol with more input values to perform a command, to process messages using only the known values of the protocol to perform a command.

Regarding claim 4, Lee et al. discloses that when the arguments in the argument field are deficient, the other electric device sets the deficient arguments as predetermined values (see Figure 7b. Response Message and p. 290, lines 36-42 [the input arguments from the network manager become deficient after the refrigerator (or slave device) executes the command code and replaces the input arguments with either an ACK or NAK and return arguments])).

Regarding claim 6, Lee et al. discloses an electric device (**see p. 287, Figure 1 the Refrigerator**) based on a predetermined protocol (**see Abstract, lines 1-9 [the protocol linking all the devices is LnCP]**) including at least a lower layer (**see p. 287, Section 2.2 [the protocol consists of a physical layer responsible for data encoding and decoding]**) and an upper layer (**see p. 287, Section 2.2 [the protocol consists of an application layer responsible for message generation, message reception, message execution, and message fragmentation]**), wherein the upper layer receives from the lower layer a message (**see p. 288, Section 5 [the application layer receives the message from the data link layer]**) including a command field including a command code that is to be applied by the electric device and an argument field (**see p. 287 column 2, lines 29-35 and Figure 7a., Request message [the master device (the network manager) sends a request message that includes a Command Code Field and an Argument Field to the slave (the refrigerator)]**); extracting a command code from the message and executing the command code using the extracted arguments (**see p. 290, Section 6.1 and Figure 7a [the request message includes the command code and the arguments to execute the command code; it is inherent that the refrigerator or any other slave device with have to extract the information from both fields in order to perform the requested function]**). Lee et al. is silent regarding the number of arguments according to a version of the protocol of the electric device for performing the command code and extract as many arguments as necessary according to the version of the protocol applied to the electric device from the argument field. However, Merrick et al. disclose

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such features (**column 15, lines 9-31 and column 24, lines 30-48 [arguments are encoded into a message and sent to the server (device) to perform a function with the arguments and to send back the return arguments; the message sent may include more arguments (values) due to an updated version; however, the mechanism allows the service to continue to function with using only information that existed in the previous version]]**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Merrick et al. into the system of Lee et al. The method of Merrick et al. can be implemented by incorporating a mechanism in the other device (refrigerator) that allows for messages sent from the one device (network manager), which uses an updated version of a protocol with more input values to perform a command, to process messages using only the known values of the protocol to perform a command.

Regarding claim 8, Lee et al. further discloses that when the arguments in the argument field are deficient, the other electric device sets the deficient arguments as predetermined values (**see Figure 7b. Response Message and p. 290, lines 36-42 [the input arguments form the network manager become deficient after the refrigerator (or slave device) executes the command code and replaces the input arguments with either an ACK or NAK and return arguments]]**).

Regarding claim 10, Lee et al. discloses a method for processing a message in a home network system, the home network system including at least two electrical devices (**see p. 287, Figure 1 the Network Manager and the Refrigerator**) and a

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network based on a predetermined protocol for connecting the devices (**see Abstract, lines 1-9 [the protocol linking all the devices is LnCP and uses the power line as a network bus]**), the method comprising generating and transmitting, at one electrical device a message including a command code field implying an operation that is to be performed by the other electric device and an argument field (**see p. 287 column 2, lines 29-35 and Figure 7a., Request message [the master device (the network manager) generates and sends the slave (the refrigerator) a request message that includes a Command Code Field and an Argument Field]**) and extracting a command code from the message and executing the command code using the extracted arguments (**see p. 290, Section 6.1 and Figure 7a [the request message includes the command code and the arguments to execute the command code; it is inherent that the refrigerator or any other slave device with have to extract the information from both fields in order to perform the requested function]**). Lee et al. is silent regarding the number of arguments according to a version of the protocol of the electric device for performing the command code and extract as many arguments as necessary according to the version of the protocol applied to the electric device from the argument field. However, Merrick et al. disclose such features (**column 15, lines 9-31 and column 24, lines 30-48 [arguments are encoded into a message and sent to the server (device) to perform a function with the arguments and to send back the return arguments; the message sent may include more arguments (values) due to an updated version; however, the mechanism allows the service to continue to function with using only information that existed in the previous version]**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the method of Merrick et al. into the system of Lee et al. The method of Merrick et al. can be implemented by incorporating a mechanism in the other device (refrigerator) that allows for messages sent from the one device (network manager), which uses an updated version of a protocol with more input values to perform a command, to process messages using only the known values of the protocol to perform a command.

Regarding claim 12, Lee et al. further discloses that when the arguments in the argument field are deficient, the other electric device sets the deficient arguments as predetermined values **(see Figure 7b. Response Message and p. 290, lines 36-42 [the input arguments form the network manager become deficient after the refrigerator (or slave device) executes the command code and replaces the input arguments with either an ACK or NAK and return arguments])**.

7. Claims 3, 7 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (A New Control Protocol for Home Appliances –LnCP -2001) in view of Merrick et al. (US 7,028,312) as applied to claims 2, 6, and 10 above, and further in view of the background of Kim (US 7,062,531).

Regarding claim 3, the references as applied above disclose all the claimed subject matter recited in claim 2. However, Muchow further teaches the other device discards arguments not extracted from the argument field **(column 21, lines 59-61**

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[nodes only process the fields that are known using their current protocol version; they disregard the remainder]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further implement the method as described by Muchow. The method of Muchow can be implemented by enabling a slave device operating on the lower protocol version to extract the parameters (or arguments) relevant to its current protocol version and discard or disregard the remainder of the parameters in order to process the request of the master device which is operating on an updated protocol version.

Regarding claim 7, the references as applied above disclose all the claimed subject matter recited in claim 6. However, Muchow further teaches the other device discards arguments not extracted from the argument field **(column 21, lines 59-61 [nodes only process the fields that are known using their current protocol version; they disregard the remainder])**.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further implement the method as described by Muchow. The method of Muchow can be implemented by enabling a slave device operating on the lower protocol version to extract the parameters (or arguments) relevant to its current protocol version and discard or disregard the remainder of the parameters in order to process the request of the master device which is operating on an updated protocol version.

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Regarding claim 11, the references as applied above disclose all the claimed subject matter recited in claim 10. However, Muchow further teaches the other device discards arguments not extracted from the argument field (**column 21, lines 59-61 [nodes only process the fields that are known using their current protocol version; they disregard the remainder]**).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further implement the method as described by Muchow. The method of Muchow can be implemented by enabling a slave device operating on the lower protocol version to extract the parameters (or arguments) relevant to its current protocol version and discard or disregard the remainder of the parameters in order to process the request of the master device which is operating on an updated protocol version.

Response to Arguments

8. Applicant's arguments, filed May 21st, 2009, have been fully considered, but deemed moot in view of the new grounds of rejection, which has been necessitated by the amendment.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER T. WYLLIE whose telephone number is (571) 270-3937. The examiner can normally be reached on Monday through Friday 8:30am to 6:00pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher T. Wyllie/
Examiner, Art Unit 2419

/Jayanti K. Patel/

Supervisory Patent Examiner, Art Unit 2419